

REMARKS

Claims 1-31 are currently pending in the application, with claims 18-26 withdrawn from consideration as being directed to a non-elected species. Reconsideration of the rejected claims in view of the following remarks is respectfully requested.

Restriction Requirement

Applicants note that the Examiner has not commented upon Applicants' election of species filed August 24, 2005. More particularly, Applicants submit that at least claim 27 is a generic claim in that it requires, *inter alia*, thermal annealing at least one material to form a first island and a second island of mixed material.

Moreover, the Office Action Summary dated February 7, 2006, lists claims 1-31 as pending, but does not list claims 18-26 as withdrawn, allowed, rejected, or objected to. Applicants are treating claims 18-26 as withdrawn in this response.

It is respectfully requested that the Examiner clarify these issues in the next Official Action.

Allowed Claims

Applicants appreciate the indication that claims 2, 5, 8, 12, 13, 16, 17 and 28-31 contain allowable subject matter. However, Applicants submit that all of the claims are in condition for allowance for the following reasons.

35 U.S.C. §102 Rejection

Claims 1, 6, 9, 10, 11, and 15 were rejected under 35 U.S.C. §102(e) for being anticipated by U. S. Patent Application Publication No. 2004/0124476 in the name of Miyano ("MIYANO"). This rejection is respectfully traversed.

Under § 1.131, a rejection under 35 U.S.C. § 102(e) or § 103(a) based on a U.S. patent application publication may, upon a proper showing, be overcome by removing the publication as a reference against the claims. Applicants submit that the § 1.131 Declaration submitted herewith is sufficient to remove the MIYANO publication as a reference under the § 102(e) rejection and the §103(a) rejections, and thus is sufficient to overcome all of the pending rejections. More specifically, Applicants submit that the § 1.131 Declaration is formally and substantively sufficient to establish that the Inventors had completed the invention defined in at least claims 1 and 27 (and dependent claims) in the United States before the effective date of the MIYANO reference, i.e., November 13, 2003. The statements in the Declaration show that the formal requirements of § 1.131 are satisfied, namely:

- (1) the rejections to be overcome are under §§ 102(e) and 103(a);
- (2) all the acts for completing the invention of claim 1 and 27, and those claims dependent thereon were performed in the United States; and
- (3) the effective date of the MIYANO reference (i.e., November 13, 2003) is not more than one year prior to the effective filing date of the present application.

It is respectfully submitted that the statements in the Declaration are also sufficient to satisfy the substantive requirements of 37 C.F.R. § 1.131. The Declaration sets forth specific facts, of sufficient character and weight, to establish a **date of conception** before November 13, 2003, the effective date of the MIYANO reference, and to show that the Inventors and their attorneys exercised **due diligence** from a time before the effective filing date of the MIYANO reference to a constructive reduction to practice, i.e., to the filing date of the application in the United States on November 19, 2003.

DATE OF CONCEPTION

As stated in the Declaration, the Inventors conceived a method of manufacturing a structure, comprising the steps of: forming shallow trench isolation (STI) in a substrate; providing a first material on the substrate; providing a second material, which is different than the first material, on the substrate; mixing the first material and the second material into the substrate by a thermal anneal process to form a first island and second island at a nFET region and a pFET region, respectively; and forming a layer of material on the first island and the second island having a lattice constant different than the first island and the second island, wherein the STI relaxes and facilitates the relaxation of the first island and the second island. The Inventors also conceived a method of manufacturing a semiconductor structure, comprising the steps of: forming a substrate; forming shallow trench isolation of high temperature stable amorphous material in the substrate; thermally annealing at least one material into the substrate to

form a first island and a second island of mixed material; and growing an Si layer on at least the first island, straining the Si layer in one of a compressive and tensile stress, wherein the material is at least one of a first material and a second, different material.

An IBM Invention Disclosure is submitted with the Declaration as supporting evidence of this prior date of conception. It is respectfully submitted that the Invention Disclosure shows that the Inventors had a definite and permanent idea of the complete and operative invention of all the pending claims 1-31 prior to November 13, 2003, the effective date of the MIYANO reference.

Applicants note that the attached invention disclosure labeled "FIS8- -0323" was forwarded to the inventors along with the Declaration and includes the subject matter of the invention recited in the claims of the instant application. In particular, the Invention disclosure shows, both textually and in figures, the features of independent claims 1 and 27 (and dependent claims). Also, Applicants note that the original Invention Disclosure has a date antedating the November 13, 2003 effective date of the MIYANO reference. This and all other pertinent dates have been removed from the photocopies of the Invention Disclosure and accompanying documents submitted with the Declaration to prevent any potential prejudice to Applicants.

Applicants further submit that the Declaration filed herewith shows, unequivocally, that the Inventors had in their possession a definite and permanent idea of the complete and operative invention of the pending claims before November 13, 2003 in a manner sufficient to satisfy the requirements of conception, as set forth in M.P.E.P. 715.07 and 2138.04, and thus constitute *prima facie* evidence of Applicants'

date of conception of the invention in this country before the effective date of the MIYANO reference.

Moreover, Applicants submit that the Declaration and Power of Attorney for Patent Application, which was executed by all of the inventors on November 12, 2003, constitutes *prima facie* evidence of Applicants' date of conception of the invention in this country before the effective date of November 13, 2003, of the MIYANO reference.

DUE DILIGENCE

Applicants further submit that the Declaration shows the Inventors and their attorneys exercised due diligence from a time before the November 13, 2003 effective date of the MIYANO reference to a constructive reduction to practice, realized by the filing of the above-identified parent application on November 19, 2003 in the United States.

The Invention Disclosure was submitted to the IBM review board before November 13, 2002. After approval, the invention disclosure was forwarded to outside counsel thereafter in a timely manner. Discussions between the Inventors and counsel took place until a final application was forwarded to the Inventors for execution, and subsequent filing on November 19, 2003. In particular, discussions between Inventor Chidambarrao and outside counsel took place at least in October and November of 2003.

Counsel acted in an expeditious manner to prepare the application for filing. Under M.P.E.P. § 2138.06, only ***reasonable*** diligence is required in this regard. More specifically, § 2138.06 states that a patent attorney will be held to have exercised reasonable diligence if the attorney worked reasonably hard on the application during the critical period, taking into consideration any backlog of unrelated cases the attorney may have had and his completion of those cases along with the present application in chronological order. Applicants respectfully submit that the Declaration shows that counsel acted sufficiently expeditiously to satisfy the requirements of due diligence.

Applicants submit that the Declaration submitted herewith is sufficient to show that due diligence was exercised as required under 37 C.F.R. § 131. The Inventors remained in regular contact with counsel to answer questions, provide technical explanation, and supply the supplemental disclosure materials necessary for allowing the application to be filed in an expeditious manner.

Accordingly, Applicants respectfully request that the rejection over claims 1, 6, 9, 10, 11, and 15 be withdrawn.

35 U.S.C. §103 Rejection

Claim 3 was rejected under 35 U.S.C. §103(a) for being unpatentable over U. S. Patent Application Publication No. 2004/0124476 in the name of Miyano ("MIYANO"). Claims 4, 7, and 14 were rejected under 35 U.S.C. §103(a) for being unpatentable over MIYANO in view of U. S. Patent Application Publication No. 2004/0212035 in the name of Yeo et al. ("YEO"). Claim 27 was rejected under 35 U.S.C. §103(a) for being

unpatentable over the article "Local Mechanical-Stress Control (LMC): A New Technique for CMOS-Performance Enhancement" by Shimizu et al. ("SHIMIZU") in view of YEO. These rejections are respectfully traversed.

Applicants initially note that the rejection of claim 27 appears to be based on SHIMIZU in view of MIYANO, instead of SHIMIZU in view of YEO. More particularly, paragraph 13 of the Office Action states that claim 27 is rejected as obvious over SHIMIZU in view of YEO. However, YEO is not subsequently discussed with respect to claim 27. Instead, in paragraphs 16 and 17 of the Office Action, the Examiner discusses features of MIYANO with respect to claim 27. Thus, it appears that the rejection of claim 27 is based upon MIYANO instead of YEO, and will be treated as such in this Response.

Applicants respectfully submit that, as discussed above, the MIYANO reference does not qualify as prior art under 35 U.S.C. §102(e). Thus, the MIYANO reference also does not qualify as prior art under 35 U.S.C. §103(a). Therefore, all of the rejections under 35 U.S.C. §103(a) that are based in whole or in part on MIYANO should be withdrawn.

Accordingly, Applicants respectfully request that the rejection over claims 3, 4, 7, 14, and 27 be withdrawn.

Rejoinder of non-elected claims

Applicants submit that claim 27 is a generic claim, and request that the withdrawn claims 18-26 be rejoined and the entire application be allowed to pass to issuance.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants submit that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Applicants hereby make a written conditional petition for extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 09-0458.

Respectfully submitted,
Dureseti CHIDAMBARRAO



Andrew M. Calderon
Reg. No. 38,093

May 8, 2006
GREENBLUM & BERNSTEIN, P.L.C.
1950 Roland Clarke Place
Reston, VA 20191
(703) 716-1191